business or consumer demand for satellite services, especially for new untried services.[149] Consequently, there are substantial risks to the investors in satellite systems, whether they are equity investors in the satellite companies or banks and other financial organizations that make loans to satellite companies through the purchase of bonds or using other financial debt instruments.

113. If satellite companies are able to sell their licenses, *i.e.* "traffic" in their licenses, even before they have built and operated facilities, the risk of default on loans to bond holders or the non-payment of dividends to equity holders is reduced, and therefore those satellite companies may be more likely in the first place to be able to attract equity capital and to obtain loans at more attractive interest rates. The Commission's unwillingness to allow companies to sell their "bare" license for more than their expenses incurred in obtaining the license to purchasers willing and able to proceed with their business plans may discourage original investment in those organizations. In such cases, companies may be less likely to succeed in the first place, and thus less likely to undertake the initial activity.

114. Moreover, if after obtaining a satellite license, a company discovers that its business plan is not viable, it may be reluctant to return its license to the Commission and receive no compensation. The licensee may also be reluctant to sell the license for no more than its expenses, even if that sale would benefit consumers and society as a whole. Consequently, such a company may hold on to the license for some years without either returning the license to the Commission, going forward on the construction of the satellite system, or selling the license to another company. At the current time, companies may transfer "bare" satellite licenses to other companies, with Commission approval, provided that they do not receive any payment beyond legitimate expenses. If, however, companies knew that they were allowed to earn a profit by selling their license to another company able to meet the milestone schedule in the license, they might be far less reluctant to sell, and a transaction might take place much faster. In that case, the new buyer would obtain the license faster. In addition, because the new buyer wished to operate the licensed facility, and should be in a better position to meet the milestone requirements in the license, it could begin its business more rapidly.

115. In addition, the existence of the anti-trafficking rule likely slows down the approval of satellite license transactions for another reason. Because the sale of bare licenses for a profit is prohibited, but the sale of a bare license for actual expenses is allowed, companies wishing to sell their license may spend substantial time and resources in attempting to structure a transaction in such a way that it will pass the anti-trafficking rule. Moreover, Commission staff will also spend time and resources analyzing transactions to determine that they do not violate the anti-trafficking rule. A number of recent transactions have involved this particular issue.[150] Had the anti-trafficking rule not existed, the applicants could have filed their applications faster and the staff would also have been able to grant them more quickly.

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[149] John C. Tanner, *LEOsats Reinvented; Globalstar and Iridium Satellite*, America's Network (July 15, 2001, Vol. 105, No. 11); Tim Foran, *Satellite Providers Look to Past to Find Future*, Network World Canada (Jan. 26, 2001).

[150] *NetSat 28 Transfer Order*, 16 FCC Rcd 14471; Application of VisionStar, Incorporated, Licensee, Shant Hovnanian, Transferor, and EchoStar VisionStar Corporation, Transferee, for Consent to Transfer Control over Authorization to Construct, Launch and Operate a Ka-band Satellite System in the Fixed-Satellite Service at the 113° W.L. Orbital Location, *Order and Authorization*, 16 FCC Rcd 19187 (Int'l Bur., 2001).

116. We also are aware of questions concerning repeal of the anti-trafficking rules. Anti-trafficking rules discourage speculators and prevent unjust enrichment of individuals or companies that have no intention of building facilities and actually operating satellite systems.[151] However, we seek comment on whether our proposed revisions to the Commission's milestone requirements, which would result in forcing licensees to begin construction of their satellite systems almost immediately, which would discourage most speculative applications. In addition, we propose requiring all license purchasers to comply with the milestones in the original license. Under this proposal, the market value of a license will depreciate rapidly if the seller makes no attempt to begin construction of its satellite system. As each milestone date approaches, the risk of failing to meet that milestone increases if the seller has made no efforts to meet the milestone. Consequently, prospective buyers will place less value on that license. Therefore, strict milestone enforcement will make it more difficult for a licensee to profit unreasonably from the sale of a license obtained for speculative purposes.

117. Furthermore, the nature of satellites and satellite services make speculative applications unlikely. A satellite system, especially a satellite network involving multiple satellites, is highly complex technically and costly to develop and build. Our satellite application regulations will continue to require the filing of a technical showing concerning the planned system, as well as the payment of significant filing fees, ranging from $90,000 to $300,000. For example, the application fee to file for a GSO space station is currently $93,375.[152] The application fee for a system of technically identical NGSO space stations is currently $321,570.[153] We realize that an applicant might spend these sums of money, obtain a license and still be able to sell the license for a very substantial profit. Nevertheless, we doubt that, given costs of these magnitudes, it is likely that the Commission would receive very large numbers of frivolous or entirely speculative applications. Accordingly, we request comment on whether the Commission should repeal its anti-trafficking rules with respect to satellite licenses issued under the strictly enforced milestone requirements we propose above. In particular, we invite comment on whether our analysis strikes a reasonable balance between the competing goals of preventing unjust enrichment and expediting service to the public.

D. Mandatory Electronic Filing

118. We solicit comment on requiring satellite applicants to file license applications electronically. We have found that electronically filed earth station applications can be processed in about half the time as paper earth station applications.[154] We also expect that we could process electronically filed space station applications more quickly than paper space station applications. We believe that Internet access has become sufficiently common that few if any U.S.-licensed satellite operators will be disadvantaged by mandatory electronic filing.

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151 Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, *Report and Order*, CC Docket No. 92-166, 9 FCC Rcd 5936, 6014 (para. 203) (1994); *Ka-band Service Rules Order*, 12 FCC Rcd at 22339-40 (para. 74).

152 *See* 47 C.F.R. § 1.1107; http://www.fcc.gov/fees/2000ibguide.pdf.

153 *See* 47 C.F.R. § 1.1107; http://www.fcc.gov/fees/2000ibguide.pdf.

154 *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25153 (para. 76).

E. Replacement Satellites

119. The Commission has stated that, given the huge costs of building and operating space stations, there should be some assurance that operators will be able to continue to serve their customers.[155] Therefore, the Commission has stated that, when an orbit location remains available for a U.S. satellite with the technical characteristics of the proposed replacement satellite, it will generally authorize the replacement satellite at the same location.[156] It has also acted on applications for replacement satellites as they are filed, without consolidating them into a processing group.[157]

120. We usually grant replacement satellite applications pursuant to Order, however. We propose streamlining this process by grant-stamping unopposed replacement satellite applications with technical characteristics consistent with those of the satellite to be retired.[158] We envision this process to be similar to that we use for unopposed earth station applications. We would simply stamp the application as "granted" and return a copy to the applicant. As an alternative, we could deem unopposed satellite applications granted after a specific amount of time after date for petitions for deny has passed, unless we issue a public notice stating that we need more time to review the application. Under this proposal, once we have decided to allow the application to be deemed granted, we would issue a public notice announcing that fact. We seek comment on limiting this procedure to unopposed replacement satellite applications.[159] We also invite comment on adopting a time period of at least 60 days after the time for oppositions to deny have passed. We believe this time period is reasonable because replacement satellites are

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[155] *See* Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service, *Memorandum Opinion and Order*, 3 FCC Rcd 6972, 6976 n.31 (1988) (*1988 Orbit Assignment Order*); Hughes Communications Galaxy, Inc., *Order and Authorization*, 6 FCC Rcd 72, 74 n.7 (1991) (*Hughes Replacement Order*); GE American Communications, Inc., *Order and Authorization*, 10 FCC Rcd 13775, 13775-76 (para. 6) (Int'l Bur. 1995) (*GE Americom Replacement Order*).

[156] *1988 Orbit Assignment Order*, 3 FCC Rcd at 6976 n.31; *GE Americom Replacement Order*, 10 FCC Rcd at 13775-76 (para. 6).

[157] *GE Americom Replacement Order*, 10 FCC Rcd at 13775-76 (para. 6); Loral Spacecom Corp., *Order and Authorization*, 13 FCC Rcd 16348, 16440 (para. 5) (Int'l Bur., Sat. and Rad. Div., 1995).

[158] We have stated that we will generally authorize replacement satellites provided that the location remains available for assignment to a U.S.-licensed satellite and the technical characteristics of the proposed replacement allow it to be assigned to the location. *Hughes Replacement Order*, 6 FCC Rcd at 74 n.7.

[159] We note that we have procedures for other kinds of international applications in which we grant applications without Orders. For example, applications for international Section 214 authorizations are deemed granted after 14 days, except under certain circumstances. *See* 47 C.F.R. § 63.12. Moreover, the Commission recently adopted procedures providing for the grant of an application announced as eligible for streamlined treatment within 45 days from the date the International Bureau issues the public notice accepting the application for filing, unless the Commission notifies the applicant in writing that the application has been removed from streamlined processing. *See* Review of Commission Consideration of Applications under the Cable Landing License Act, Report and Order, IB Docket No. 00-106, FCC 01-332 (released Dec. 14, 2001) at para. 45. Under these procedures, submarine cable landing license applications qualifying for streamlined treatment may be granted by public notice. *Id.* at para. 48.

new satellites with new technical parameters that must be reviewed.[160] We invite comment on both the grant-stamp and the "deemed granted" proposals.

F. Non-U.S.-Licensed Satellites

1. Background

121. Under the terms of the World Trade Organization (WTO) Agreement on Basic Telecommunications Services (WTO Telecom Agreement),[161] 78 WTO Members, including the United States, have made binding commitments to open their markets to foreign competition in satellite services.[162] The Commission concluded that providing opportunities for non-U.S.-licensed satellites to deliver services in the United States would bring U.S. consumers the benefits of enhanced competition.[163] This policy also promotes greater opportunities for U.S. companies to enter previously closed foreign markets, thereby stimulating a more competitive global satellite services market.[164]

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[160] *See 1988 Orbit Assignment Order*, 3 FCC Rcd at 6976 n.31; *Hughes Replacement Order*, 6 FCC Rcd at 74 n.7 (We generally authorize replacement satellites provided that the location remains available for assignment to a U.S.-licensed satellite and the technical characteristics of the proposed replacement allow it to be assigned to the location. Thus, replacement satellites need not be exactly the same as the satellites they replace). *See also* An Inquiry Relating to Preparation for an International Telecommunication Union World Administrative Conference on the Use of the Geostationary-Satellite Orbit and the Planning of the Space Services Utilizing It, *First Report and Order*, Gen. Docket No. 80-741, 100 FCC 2d 976, 1006 (para. 98) (1985) ("Replacement satellites should incorporate appropriate improvements in technology that will inevitably have arisen since the original satellite was first designed, ..."); Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.6/2483.5-2500 MHz Frequency Band, *Memorandum Opinion and Order*, CC Docket No. 92-166, 11 FCC Rcd 12861, 12877-78 (paras. 48-50) (1996) (satellite system improvements can be authorized either at the time of license renewal license or through license modifications).

[161] The WTO came into being on January 1, 1995, pursuant to the Marrakesh Agreement Establishing the World Trade Organization (the Marrakesh Agreement). 33 I.L.M. 1125 (1994). The Marrakesh Agreement includes multilateral agreements on trade in goods, services, intellectual property, and dispute settlement. The General Agreement on Trade in Services (GATS) is Annex 1B of the Marrakesh Agreement. 33 I.L.M. 1167 (1994). The WTO Telecom Agreement was incorporated into the GATS by the Fourth Protocol to the GATS (April 30, 1996), 36 I.L.M. 354 (1997) (Fourth Protocol to the GATS).

[162] Fourth Protocol to the GATS, 36 I.L.M. at 363. *See also DISCO II*, 12 FCC Rcd at 24102 (para. 19). The United States made market access commitments for fixed and mobile satellite services. It did not make market access commitments for Direct-to-Home (DTH) Service, Direct Broadcast Satellite Service (DBS), and Digital Audio Radio Service (DARS), and took an exemption from most-favored nation (MFN) treatment for these services as well. *See* Fourth Protocol to the GATS, 36 I.L.M. at 359. Generally, GATS requires WTO member countries to afford most-favored nation (MFN) treatment to all other WTO member nations. "With respect to any measure covered by this Agreement, each Member shall accord immediately and unconditionally to services and service suppliers of any other Member treatment no less favourable than that it accords to like services and service suppliers of any other country." GATS Article II, paragraph 1. Member nations are permitted to take "MFN exemptions," however, under certain circumstances specified in an annex to GATS. *See* GATS Annex on Article II Exemptions.

[163] *DISCO II*, 12 FCC Rcd at 24097 (para. 4).

[164] *DISCO II*, 12 FCC Rcd at 24099 (para. 10).

122. In *DISCO II*, the Commission adopted a framework under which it would consider requests for access to the U.S. market for satellite services by non-U.S.-licensed satellite operators consistent with the U.S. commitments under the WTO Telecom Agreement.[165] In *DISCO II*, the Commission established two procedures by which a satellite provider could bring before it requests to allow a non-U.S. satellite to provide service in the United States.[166] The first procedure is applicable in cases where the non-U.S. satellite operator wishes to participate in a space station processing round. A non-U.S. satellite operator can participate in a processing round by filing a "letter of intent" to use its non-U.S. satellite to provide service in the United States through future earth stations that may or may not be ultimately licensed to it. That letter of intent must demonstrate that the space station will meet all applicable Commission requirements.[167]

123. The second procedure is applicable in cases where the non-U.S. satellite operator seeks immediate access to the U.S. market through an in-orbit satellite, and has initiated international coordination negotiations for that satellite network pursuant to the International Telecommunication Union's (ITU's) international Radio Regulations.[168] Under this procedure, a prospective U.S. earth station operator seeking to communicate with the non-U.S. space station must file an application for an initial earth station license, listing the non-U.S. space station as a "point of communication," and demonstrating that the space station meets all applicable Commission requirements.[169] Further, if an existing earth station licensee seeks to communicate with a non-U.S. satellite, it must file a modification application to add the satellite as a permitted point of communication on its license. This application must be accompanied by a demonstration that the non-U.S.-licensed satellite complies with the Commission's rules. This demonstration is identical to that required of U.S.-licensed space station operators. Subsequent earth station licensees seeking to access that space station as a permitted "point of communication" do not need to provide supporting documentation, provided they communicate using the same technical parameters and under the same conditions as the first earth station applicant.[170] The Commission streamlined this procedure in the *DISCO II First Reconsideration Order*, in which it adopted the Permitted List.[171] We discuss the Permitted List further below.

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165 In evaluating requests by foreign-licensed satellites to serve the U.S. market, the Commission adopted a public interest framework that considers the effect on competition in the United States, spectrum availability, eligibility and operating (*e.g.*, technical) requirements, and national security, law enforcement, foreign policy, and trade concerns. *See, e.g., DISCO II First Reconsideration Order*, 15 FCC Rcd at 7209-10 (paras. 4-5).

166 *DISCO II*, 12 FCC Rcd at 24174 (para. 188).

167 *DISCO II*, 12 FCC Rcd at 24173-74 (paras. 184-85, 188).

168 *DISCO II*, 12 FCC Rcd at 24174 (para. 186).

169 *See generally* 47 C.F.R. § 25.137. The Commission does not require the foreign space station operator to submit technical information if it has completed the coordination process with the United States, or to submit financial information if the satellite has been launched. *See* 47 C.F.R. § 25.137(b); *DISCO II*, 12 FCC Rcd at 24175-76 (para. 191).

170 *DISCO II*, 12 FCC Rcd at 24176 (para. 192). The "technical parameters" to which we referred in *DISCO II* include all the technical requirements of Part 25 of the Commission's rules, including but not limited to frequency bands, E.I.R.P., density, polarization, power, and emission characteristics.

171 *DISCO II First Reconsideration Order*, 15 FCC Rcd 7207.

124. Under both of these procedures, each request for U.S. market access must contain the information required in Section 25.114 of the Commission's rules, which governs applications for space station authorizations, with two exceptions.[172] The Commission does not require the non-U.S. space station operator to submit technical information if it has completed the coordination process with the United States, or to submit financial information if the satellite has been launched.[173]

125. In this Section, we seek comment on modifications to the procedures applicable to operators of non-U.S.-licensed satellites seeking access to the U.S. market, to be consistent with the proposed revisions to the procedures for U.S.-licensed satellites we discuss above. We also take this opportunity to propose additional rule revisions to help clarify the requirements of non-U.S.-licensed satellites seeking access to the U.S. market.

2. Revision of Framework

126. Currently, non-U.S.-licensed space station operators may participate in a processing round by filing a Letter of Intent.[174] None of the proposed processing round modifications discussed in Section III.C. would require revision of the current Letter of Intent procedure. However, if we replace processing rounds with the first-come, first served procedure we propose in Section III.B. above, we will need to revise the framework for considering requests for market entry by non-U.S.-licensed space station operators. Accordingly, we seek comment on treating Letters of Intent and earth station applications like space station applications for purposes of determining application status. In other words, a Letter of Intent filed by a non-U.S. space station operator would cut off the rights of subsequently filed U.S. space station applications and Letters of Intent filed by other non-U.S. space station operators.[175] We seek comment on this proposal.

127. We also generally require non-U.S.-licensed space station operators to provide all the information we require of U.S. applicants.[176] We propose continuing to do so, under both the processing round modification option and the first-come, first-served option. In particular, we propose applying the same expanded technical information requirements discussed in Section IV. to U.S. and non-U.S. space station operators.[177] This proposal is consistent with our WTO commitments to treat non-U.S. satellite operators no less favorably than we treat U.S. satellite operators.

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172 *See generally* 47 C.F.R. § 25.137; *DISCO II*, 12 FCC Rcd at 24174 (para. 188).

173 *See* 47 C.F.R. § 25.137(b); *DISCO II*, 12 FCC Rcd at 24175-76 (para. 191).

174 *DISCO II*, 12 FCC Rcd at 24173-74 (paras. 184-85, 188).

175 We solicit comment on methods for selecting among mutually exclusive applications in Section III.B.4., *supra*.

176 47 C.F.R. § 25.137.

177 *See* Section III.B., *supra*.

128. Above, we invite comment on requiring U.S. satellite operators to file applications electronically.[178] We invite comment on whether we should require non-U.S.-licensed satellite operators to file Letters of Intent electronically. Do non-U.S.-licensed satellite operators face circumstances that make electronic filing impractical for them? If we adopt mandatory electronic filing for U.S. satellite operators but not for non-U.S. satellite operators, in what order should we consider a U.S. satellite application and a non-U.S. Letter of Intent filed on the same day?

3. Financial Qualifications of Non-U.S. Satellite Operators

129. Currently, non-U.S.-licensed satellite operators who have not launched their satellites must meet our financial qualification rules when requesting access to the U.S. market.[179] In this *Notice*, however, we propose eliminating our financial qualification rules for U.S.-licensed satellites, and strengthening our milestone rules.[180] We tentatively conclude that, in the event that we adopt our financial qualification proposal, we should also eliminate the financial qualification requirement for non-U.S.-licensed satellite operators. We further tentatively conclude that non-U.S.-licensed satellite operators should be required to meet all milestone requirements we adopt for U.S.-licensed satellite operators in this proceeding.[181]

4. Information Requirements for Coordinated Non-U.S. Satellites

130. Under *DISCO II*, operators of non-U.S.-licensed satellites are not required to submit certain technical information if they have completed international coordination.[182] In practice, however, it has been very time-consuming or, in some cases, impossible to derive that technical information from international coordination agreements. Accordingly, when a non-U.S.-satellite operator has relied on a coordination agreement and we cannot determine that a non-U.S.-licensed satellite can operate interference-free in a two-degree-spacing environment, we have required U.S.-licensed earth stations operating with that satellite to do so on a non-harmful interference basis.[183]

131. Recent experience in evaluating requests for access by non-U.S. licensed space stations has shown, however, that the exemption from submitting technical information in the case where the coordination process with the United States has been completed may not provide

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178 Section V.D.

179 *See* 47 C.F.R. § 25.137(b); *DISCO II*, 12 FCC Rcd at 24175-76 (para. 191).

180 Section V.B.

181 We note that we required Pacific Century Group, Inc. (PCG), a non-U.S.-licensed satellite operator participating in the second Ka-band processing round through a Letter of Intent, to meet the same milestones as other licensees in the second Ka-band processing round. Pacific Century Group, Inc., Letter of Intent as a Foreign Satellite Operator to Provide Fixed Satellite Services in the Ka-band in the United States, *Order*, 16 FCC Rcd 14356, 14364 (paras. 25-26) (Int'l Bur., 2001).

182 47 C.F.R. § 25.137(b); *DISCO II*, 12 FCC Rcd at 24175-76 (para. 191). Specifically, we do not require those satellite operators to provide the information specified in Sections 25.114(c)(5) through (11) and (14). *See* 47 C.F.R. § 25.137(b).

183 Telesat Canada, Request for Declaratory Ruling or Petition for Waiver on Earth Stations' Use of ANIK E1 and ANIK E2 Satellite Capacity to Provide Basic Telecommunications Service in the United States, *Order*, 15 FCC Rcd 3649, 3654 (para. 14) (Int'l Bur., 1999).

adequate information to allow the Commission to find that the non-U.S. space station meets its technical rules. For example, in many cases, coordination can be completed without the exchange of technical information if the non-U.S. space station is sufficiently far away from U.S. space stations or locations filed at the ITU by the United States. When technical information is exchanged in the coordination process, the information will not necessarily be adequate for a Commission finding of technical compliance with its technical rules since the international coordination negotiation process with the non-U.S. satellite is not subject to our technical rules. When coordination is complete, U.S. access can be granted without a Commission finding of technical compliance as long as the current orbital population remains unchanged. However, we may license a U.S. space station or grant foreign access in the future on an adjacent non-U.S. satellite, either of which could be affected by U.S. services on the non-U.S. space station with prior U.S. access. Since compliant U.S. services have priority over non-compliant U.S. services for access to the U.S. market, the process of either finding compliance, or defining conditions to protect future compliant U.S. services from interference caused by current services over coordinated foreign space stations, has been both labor-intensive and time-consuming. On occasion, this has led to delays in granting access to foreign space stations. To correct this and to facilitate the hard-look approach, we propose to modify our rules to require all non-U.S.-licensed space stations seeking initial access to the United States to submit all satellite-related technical information specified in Part 25, regardless of coordination status.

5. Procedures for Modifications of Permitted List Satellite Parameters

132. We noted above that one of the procedures adopted in *DISCO II* for non-U.S. satellite operators seeking access to the U.S. market was to require the satellite operator to file a new earth station application identifying the non-U.S. satellite as a point of communication, or to ask a U.S. earth station operator to modify its license to add the non-U.S. satellite as a point of communication.[184] In the 1999 *DISCO II First Reconsideration Order*, the Commission streamlined this process in two ways. First, it allowed the *operators* of in-orbit non-U.S. satellites offering fixed-satellite service to request authority to provide space segment capacity service to licensed earth stations in the United States. Under *DISCO II*, this request could be made only by an earth station operator. Second, it created the Permitted Space Station List (Permitted List) to facilitate access by the foreign satellite. Once a non-U.S. space station is permitted to access the U.S. market pursuant to a complete *DISCO II* analysis, it is placed on the Permitted List upon the applicant's request. This list includes all satellites with which U.S. earth stations with routinely-authorized technical parameters in the conventional C- and Ku-band (known as "ALSAT" earth stations) are permitted to communicate without additional Commission action, provided that those communications fall within the same technical parameters and conditions established in the earth stations' original licenses.[185] The Permitted List is maintained on our website, and is also available via fax or e-mail.[186]

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[184] *See* Section V.F.1. *See also DISCO II*, 12 FCC Rcd at 24174 (para. 186).

[185] *DISCO II First Reconsideration Order*, 15 FCC Rcd at 7214-16 (paras. 16-20). "ALSAT" means "all U.S.-licensed space stations." Originally, under an ALSAT earth station license, an earth station operator providing fixed-satellite service in the conventional C- and Ku-bands could access any U.S. satellite without additional Commission action, provided that those communications fall within the same technical parameters and conditions established in the earth stations' licenses. *See DISCO II First Reconsideration Order*, 15 FCC Rcd at 7210-11 (para. 6). The *DISCO II First Reconsideration Order* expanded ALSAT earth station licenses to permit access to any satellite on the Permitted List. *DISCO II First Reconsideration Order*, 15 FCC Rcd at 7215-16 (para. 19).

[186] *DISCO II First Reconsideration Order*, 15 FCC Rcd at 7215-16 (para. 19).

133. We have placed several satellites on the Permitted List, and have received a number of requests from non-U.S. satellite operators to reflect changes in the operating parameters of their satellites on the Permitted List. Some of these revisions would require a license modification if the satellite were licensed in the United States.[187] We have also received a request to place a replacement satellite on the Permitted List,[188] and to reflect a transfer of control of the satellite on the Permitted List.[189] Accordingly, we take this opportunity to propose procedures to address revisions to the Permitted List and similar situations.

134. First, we address issues raised with respect to non-U.S. satellites on the Permitted List. Placing a satellite on the Permitted List has the legal effect of modifying all ALSAT-designated earth station licenses so that those earth stations are authorized to communicate with that satellite at that orbit location under the terms and conditions on the Permitted List and in the earth station licenses. Thus, for example, if a Permitted List satellite operator relocates its satellite to a new orbital location, it must request a revision of its Permitted List entry to enable ALSAT earth stations to continue communicating with that satellite after the relocation. Furthermore, we must be able to determine that operation of the satellite at the new location would not cause harmful interference to other satellite systems after the relocation. Therefore, in a case where a non-U.S. satellite operator plans to modify its operations, and that modification would require a U.S.-licensed satellite operator to request prior Commission authorization, we propose requiring the non-U.S. satellite operator to file a petition for declaratory ruling including the information required of U.S. satellite operators seeking license modifications. In other words, the non-U.S. satellite operator would be required to provide the same information as required in a new space station application, but only those items of information that change need to be submitted, provided the applicant certifies that the remaining information has not changed.[190]

135. In this *Notice*, we solicit comment on streamlining the procedure for replacement satellite applications.[191] We propose a similar procedure for replacements of non-U.S. satellites on the Permitted List. Specifically, if the non-U.S. satellite operator's orbit location remains available for a satellite licensed by the same Administration that licensed the currently operating satellite, and the proposed replacement satellite will have the same technical characteristics as the currently operating satellite, we will generally include the replacement satellite on the Permitted List. If the petition for declaratory ruling seeking to put the replacement satellite on the Permitted

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187 *See* Telesat Canada, Petition for Declaratory Ruling For Inclusion of ANIK F1 on the Permitted Space Station List, *Order*, 15 FCC Rcd 24828 (Intl. Bur., 2000).

188 European Telecommunication Satellite Organization (EUTELSAT); Petitions for Declaratory Ruling To Add EUTELSAT Satellites ATLANTIC BIRD™ 1 at 12.5° W.L and ATLANTIC BIRD™ 2 at 8° W.L to the Commission's Permitted Space Station List, *Order*, 16 FCC Rcd 15961 (Int'l Bur.. Sat. and Rad. Div., 2001).

189 On March 1, 2001, Empresa Brasileira de Telecomicaçöes S.A. filed a letter with the Commission indicating that 19.9 percent of its company had been purchased by Societe Europeenne des Satellites S.A., and the company was renamed "STAR ONE S.A." *See* Satellite Policy Branch Information, *Public Notice*, Report No. SAT-00076 (released July 20, 2001).

190 47 C.F.R. § 25.117(d).

191 Section V.E., *supra*.

List is unopposed, we propose applying the same procedure we adopt for U.S. replacement satellites.

136. We invite comment on a very simple procedure for transfers of control and assignments of non-U.S.-licensed satellites on the Permitted List. Because non-U.S.-licensed satellites are not subject to many of the requirements of the Communications Act, such as the foreign ownership requirements of Section 310, it may not be necessary to subject transfers of control and assignments of non-U.S.-licensed satellites on the Permitted List to the same level of review as transfers of U.S.-licensed satellites. Under this proposal, we would issue a public notice announcing that the transaction has taken place, and invite comment on whether the transaction affects any of the considerations we made when we allowed the satellite operator to enter the U.S. market. We would review any comments filed, and determine whether any commenter raised any concern that would warrant precluding the satellite operator from entering the U.S. market after the change in ownership. We would also review the transaction to determine whether the change in ownership affects any of the determinations we made when we allowed the satellite operator to enter the U.S. market. For example, does the change in ownership raise any national security, law enforcement, foreign policy, and trade concerns?[192] In addition, if control of the satellite were transferred to a non-WTO-country-based operator, we would require the parties to show that the purchaser meets the requirements of the ECO-Sat test.

137. With respect to non-U.S. satellite operators that wish to amend a proposal for a satellite system described in a Letter of Intent, we propose requiring an additional Letter of Intent describing the changes. We also propose treating such letters as we would treat amendments filed by a U.S. satellite applicant. In other words, if the planned changes would increase the potential for interference, the non-U.S. satellite operator would lose its status relative to later-filed applications. We invite comment on this approach. We also seek comment on the effects, if any, of the process for filing modifications of ITU filings on our proposal for amendments of Letters of Intent.

138. As we noted above, non-U.S.-licensed satellite operators do not need to place their satellites on the Permitted List to gain access to the U.S. market. They can also gain access by being added as a point of communication to one or more U.S. earth station licenses. With respect to non-U.S. satellites that are not on the Permitted List, but have access to the U.S. market because one or more U.S. earth station licenses have added the space station as a point of communication, we do not propose any changes to our procedures. In those cases, each earth station operator is required to modify its license to include the modified non-U.S. satellite as a point of communication. We invite comment on retaining this procedure.

VI. REPORT AND ORDER: SPACE STATION AND EARTH STATION LICENSE TERMS

A. Background

139. In the *2 GHz Report and Order*, we observed that the Telecommunications Act of 1996 granted the Commission authority to establish longer license terms for particular classes of satellites, and established 15-year terms for earth stations operating in the 2 GHz band.[193] In the

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192 *See DISCO II*, 12 FCC Rcd at 24170-72 (paras. 178-82).

193 *2 GHz Order*, 15 FCC Rcd at 16175 n.359, *citing* Telecommunications Act of 1996, Pub. L. No. 104-104, Title II, § 203, 110 Stat. 56, 112 (1996) (amending Section 307 of the Communications

Part 25 Earth Station Streamlining NPRM, we sought comment on extending the term for all earth station licenses from 10 years to 15 years.[194]

140. In addition, two of the commenters in the *Part 25 Earth Station Streamlining* proceeding, Astrolink and Hughes, recommended expanding the space station license term from ten to 15 years. As explained further below, those comments provide a sufficient record to extend the space station license term. In addition, this proceeding, in which we examine several space station procedural issues, provides a good vehicle for extending the license term. Accordingly, we hereby extend the space station license term as proposed by Astrolink and Hughes, and we extend the earth station license term as we proposed in the *Part 25 Earth Station Streamlining NPRM*. We explain these conclusions further below.

B. Transmit-Receive and Transmit-Only Earth Stations

141. Several parties support this proposal,[195] and no one opposed it. We conclude that extending the earth station license term will reduce the administrative burdens on earth station operators, without affecting our ability to protect licensees from harmful interference. Accordingly, we extend the earth station license term to 15 years. After these rules take effect, we will give 15-year terms in new earth station licenses, and we will issue 15-year renewal licenses at the time licensees request renewals of their licenses.

142. Globalstar suggests extending all current earth station licenses by five years to implement the license term extension proposal immediately.[196] We decline to adopt Globalstar's proposal. We conclude that it would require excessive administrative resources to reissue all earth station licenses to specify an extended expiration date. We also find that it would be potentially confusing to licensees if the expiration date listed on the face of the license is not the correct date.

C. Space Stations

143. In its comments, Astrolink recommends extending the space station license term in its comments from 10 years to 15 years.[197] Hughes supports Astrolink's recommendation in its reply, and no one opposes it. In addition, Astrolink and Hughes point out that establishing equivalent license terms for space stations and earth stations would significantly reduce the administrative burdens associated with Ka-band satellite systems.[198] We adopt Astrolink's recommendation. The useful lives of most GSO satellites today are longer than the current 10-

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Act to eliminate ten-year term and creating new Section 307(c)(1) granting the Commission authority to determine license terms for particular classes of stations, including satellite space and earth stations).

194 *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25143-44 (para. 44).

195 Astrolink Comments at 8; Globalstar Comments at 4; Hughes Comments at 17; WorldCom Comments at 2; PanAmSat Comments at 11; Spacenet Comments at 46; SIA Reply at 6-7; Hughes Reply at 12.

196 Globalstar Comments at 4.

197 Astrolink Comments at 9.

198 Astrolink Comments at 9; Hughes Reply at 12.

year satellite license term. Therefore, we find that extending the satellite license term to 15 years is reasonable.

D. Receive-Only Earth Station Registration Term

144. We also solicited comment on extending the registration term for receive-only earth station registrations from 10 years to 15 years. Registration is an optional process for receive-only earth stations operating in the C-band. Registration protects the registered earth station against interference from communications facilities that operate on a co-primary basis in shared frequency bands. Because it was not clear how many registrants use their earth stations for the full ten-year term, we noted that allowing all receive-only earth stations to remain registered for an additional five years may make it more difficult for co-primary services to coordinate their operations with satellite operations.[199]

145. Hughes supports increasing the registration term for receive-only earth stations to 15 years,[200] and no one opposed this proposal. Further, Commission rules require receive-only earth station operators notify the Commission when their terminals are unused for more than six months at a time.[201] Thus, based on the record before us, we extend the registration term for receive-only earth stations from 10 years to 15 years. After these rules take effect, new registrations will carry 15-year terms, and we will issue 15-year renewal registrations at the time existing registrations are renewed.

146. Hughes recommends eliminating the requirement that receive-only earth station operators notify the Commission when their terminals are unused for more than six months at a time.[202] Hughes claims that there is no evidence to suggest that receive-only earth stations are likely to remain unused for more than six months at a time.[203] Hughes claims therefore that this requirement is an unnecessary regulatory burden for earth station operators, and claims that terrestrial operators operating in shared bands do not face any comparable requirement.[204] We do not adopt Hughes's proposal. If Hughes is correct that receive-only earth stations do not usually remain unused for more than six months at a time, then this requirement imposes little if any burden on receive-only earth station operators. In addition, in cases where a receive-only earth station does remain unused for more than six months, it seems reasonable to conclude that the earth station has been abandoned, or would have more appropriately been registered as a temporary-fixed earth station. In either case, other earth station operators or terrestrial wireless operators should not have to coordinate their operations with that earth station.

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199 *Part 25 Earth Station Streamlining NPRM*, 15 FCC Rcd at 25144 (para. 45).

200 Hughes Comments at 17. *See also* SIA Reply at 7.

201 Hughes Comments at 17-18; Hughes Reply at 12. *See* 47 C.F.R. § 25.131(i).

202 Hughes Comments at 17-18; Hughes Reply at 12. *See* 47 C.F.R. § 25.131(i).

203 Hughes Comments at 17-18; Hughes Reply at 12.

204 Hughes Comments at 17-18; Hughes Reply at 12.

VII. CONCLUSION

147. For the reasons discussed above, we invite comment on two options for revising the current satellite procedure: (1) a first-come, first-served procedure, and (2) modifications to the current processing round procedure. Furthermore, we invite comment on expanding our technical information requirements under both options. We also seek comment on our other proposals to streamline the satellite licensing process. Parties opposing any of these proposals should explain their reasons with particularity. They also should either recommend alternatives or explain in detail why they believe the proposed rule revisions are unnecessary. Finally, interested parties are invited to recommend other ways to reform the satellite licensing process.

VIII. PROCEDURAL MATTERS

148. *Initial Regulatory Flexibility Analysis.* Appendix D to this document contains the analysis required for the proposals in this *Notice of Proposed Rulemaking* by the Regulatory Flexibility Act of 1980, *see* 5 U.S.C. § 603.

149. *Final Regulatory Flexibility Certification.* The Regulatory Flexibility Act of 1980, as amended (RFA)[205] requires that a regulatory flexibility analysis be prepared for rulemaking proceedings, unless the agency certifies that "the rule will not have a significant economic impact on a substantial number of small entities."[206] The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[207] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[208] A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).[209]

150. In this First Report and Order, the Commission extends the license term of all space station and earth station granted after the effective date of these rules from 10 years to 15 years. The effect of these rule revisions is to reduce the number of times space station and earth station licensees will be required to renew their licenses. This will reduce the administrative burdens of space station and earth station licensees. We expect that this change will be minimal and positive. Therefore, we certify that the requirements of this First Report and Order will not have a significant economic impact on a substantial number of small entities. The Commission will send a copy of the First Report and Order, including a copy of this final certification, in a report to Congress pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the First Report and Order and this certification will be sent to the Chief Counsel for Advocacy of

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205 The RFA, *see* § 5 U.S.C. S 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

206 5 U.S.C. § 605(b).

207 5 U.S.C. § 601(6).

208 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in Small Business Act, 15 U.S.C. § 632).

209 Small Business Act, 15 U.S.C. § 632.

the Small Business Administration, and will be published in the Federal Register. *See* 5 U.S.C. § 605(b).

151. *Paperwork Reduction Act.* This NPRM contains proposed new and modified information collections. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this NPRM, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. Public and agency comments are due 30 days from the date of publication in the Federal Register; OMB comments are due 60 days from date of publication of this NPRM in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

152. A copy of any comments on the information collections contained herein should be submitted to Judy Boley Herman, Federal Communications Commission, Room 1-C804, 445 12th Street, SW, Washington, DC 20554, or via the Internet to jbHerman@fcc.gov and to Jeanette Thornton, OMB Desk Officer, Room 10236 NEOB, 725 17th Street, N.W., Washington, DC 20503 or via the Internet to jthornto@mb.eop.gov.

153. The rule revisions adopted in this First Report and Order have been analyzed with respect to the Paperwork Reduction Act of 1995, Pub. L. 104-13, and do not contain new and/or modified information collections subject to Office of Management and Budget review.

154. *Ex Parte Presentations.* This is a permit-but-disclose rulemaking proceeding. *Ex parte* presentations are permitted, provided they are disclosed as provided in Sections 1.1202, 1.1203, and 1.1206(a) of the Commission's Rules, 47 C.F.R. Sections 1.1202, 1.1203, and 1.1206(a).

155. *Comment.* Pursuant to Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. Sections 1.415 and 1.419, interested parties may file comments on or before 75 days following publication in the Federal Register, and reply comments on or before 105 days following publication in the Federal Register. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by paper copies. *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24,121 (1998).

156. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To obtain filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your e-mail address." A sample form and directions will be sent in reply.

157. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number. All filings must be sent to the Commission's Secretary, William F. Caton, Office of the Secretary, Federal Communications Commission, The Portals, 445 Twelfth Street, S.W., Room TW-A325, Washington, D.C. 20554.

158. Parties who choose to file by paper should also submit their comments on diskette. These diskettes should be submitted to: Commission's Secretary, William F. Caton, Office of the Secretary, Federal Communications Commission, The Portals, 445 Twelfth Street, S.W., Room TW-A325, Washington, D.C. 20554. Such a submission should be on a 3.5-inch diskette formatted in an IBM compatible format using Word for Windows or compatible software. The diskette should be accompanied by a cover letter and should be submitted in "read only" mode. The diskette should be clearly labeled with the commenter's name, the docket number of this proceeding, type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase "Disk Copy - Not an Original." Each diskette should contain only one party's pleading, preferably in a single electronic file. In addition, commenters must send diskette copies to the Commission's copy contractor, Qualex International, Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554.

159. *Additional Information.* For general information concerning this rulemaking proceeding, contact Steven Spaeth, International Bureau, at (202) 418-1539, International Bureau; Federal Communications Commission, Washington, DC 20554.

IX. ORDERING CLAUSES

160. Accordingly, IT IS ORDERED, pursuant to Sections 4(i), 7(a), 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a), 303(c), 303(f), 303(g), 303(r), that this Notice of Proposed Rulemaking is hereby ADOPTED.

161. IT IS FURTHER ORDERED that the Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this Order, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

162. IT IS FURTHER ORDERED, pursuant to Sections 4(i), 7(a), 11, 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a), 161, 303(c), 303(f), 303(g), 303(r), that this First Report and Order is hereby ADOPTED.

163. IT IS FURTHER ORDERED that Part 25 of the Commission's rules IS AMENDED as set forth in Appendix B.

164. IT IS FURTHER ORDERED that the rule revisions adopted in this First Report and Order will be effective 30 days after a summary of this Order is published in the Federal Register.

165. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this First Report and Order, including the Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX A

Parties filing Pleadings in IB Docket No. 00-248

Comments (March 26, 2001)

1. Aloha Networks, Inc. (Aloha Networks)
2. Andrew Corporation
3. Astrolink International LLC (Astrolink)
4. GE American Communications, Inc. (GE Americom)
5. Globalstar USA, Inc. and Globalstar, L.P. (Globalstar)
6. Hughes Network Systems, Hughes Communications, Inc., and Hughes Communications Galaxy, Inc. (together, Hughes)
7. Loral Space & Communications Ltd. (Loral)
8. Motient Services, Inc. (Motient)
9. New Skies Satellites N.V. (New Skies)
10. PanAmSat Corporation (PanAmSat)[210]
11. Spacenet, Inc., and StarBand Communications, Inc. (together, Spacenet)
12. Telesat Canada (Telesat)
13. WorldCom, Inc. (WorldCom)

Replies (May 7, 2001)

1. Aloha Networks[211]
2. Astrolink
3. Comtech Mobile Datacom Corp. (CMDC)
4. GE Americom
5. Hughes
6. National Radio Astronomy Observatory (NRAO)
7. OnSat Network Communications, Inc. (Onsat)
8. PanAmSat
9. Satellite Industry Association (SIA)
10. Spacenet
11. Telesat

[210] On April 10, 2001, PanAmSat corrected certain minor errors and re-filed its comments.

[211] On May 9, 2001, Aloha Networks corrected certain minor errors and re-filed its reply.

APPENDIX B

Rule Changes

For the reasons discussed above, the Federal Communications Commission amends title 47 of the Code of Federal Regulations, part 25, as follows:

PART 25 -- SATELLITE COMMUNICATIONS

1. The authority citation for Part 25 continues to read as follows:

Authority: 47 U.S.C. 701-744. Interprets or applies Sections 4, 301, 302, 303, 307, 309, and 332 of the Communications Act, as amended, 47 U.S.C. Sections 154, 301, 302, 303, 307, 309, 332, unless otherwise noted.

2. Amend § 25.121 by revising paragraphs (a), (b), and (d)(2) to read as follows:

§ 25.121 License term and renewals.

(a) License Term. Licenses for facilities governed by this part will be issued for a period of 15 years.
(b) The Commission reserves the right to grant or renew station licenses for less than 15 years if, in its judgment, the public interest, convenience and necessity will be served by such action.

* * * * *

(d)(1) * * *

(2) For non-geostationary satellite orbit satellites, the license term will begin at 3 a.m. EST on the date that the licensee certifies to the Commission that its initial space station has been successfully placed into orbit and that the operations of that satellite fully conform to the terms and conditions of the space station system authorization. All space stations launched and brought into service during the 15-year license term shall operate pursuant to the system authorization, and the operating authority for all space stations will terminate upon the expiration of the system license.

3. Amend § 25.131 by revising paragraph (h) to read as follows:

§ 25.131 Filing requirements for receive-only earth stations.

* * * * *

(h) Registration term: Registrations for receive-only earth stations governed by this section will be issued for a period of 15 years from the date on which the application was filed. Applications for renewals of registrations must be submitted on FCC Form 405 (Application for Renewal of Radio Station License in Specified Services) no earlier than 90 days and no later than 30 days before the expiration date of the registration.

* * * * *

ATTACHMENT C

Revised Schedule S

FCC 312
Schedule S

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
(Technical and Operational Description)

Page 1: General, Frequency Bands, and GSO Orbit

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name:	e. Estimated Date of Placement into Service:	i. Total Transponder Bandwidth (No. Transponders x Bandwidth) MHz
b. Construction Commencement Date:	f. Estimated Lifetime of Satellite(s): Years	j. Number of transponders offered on a non-common carrier basis:
c. Construction Completion Date:	g. Will the space station(s) operate on a Common Carrier basis? ☐ YES ☐ NO	k. Total Non-Common Carrier Transponder Bandwidth: MHz
d. Estimated Launch Date:	h. Total Number of Transponders:	l. Orbit Type: ☐ GSO ☐ NGSO

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands inwhich this station will operate. Also indicate the nature of service(s) for each frequency band.

Frequency Band Limits			
a. Lower Frequency (MHz)	b. Upper Frequency (MHz)	c. T/R Mode	d. Nature of Service(s): List all that apply to this band

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W):	b. Alternate Orbital Locations (Degrees E/W):		c. Reason for orbital location selection
Longitudinal Tolerance or E/W Station-Keeping: d. Toward West: _____ Degrees e. Toward East: _____ Degrees	f. Inclination Excursion or N/S Station-Keeping Tolerance: _____ Degrees	Range of orbital arc in which adequate service can be provided: Degrees E/W g. From West: _____ ___ h. To East: _____ ___	
i. Reason for service arc selection:			

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY For each Orbital Plane Provide:

S4a. Total Number of Satellites in Network or System: _____ S4c. Celestial Reference Body (Earth, Sun, Moon, etc.): _____

S4b. Total Number of Orbital Planes in Network or System: _____ S4d. Orbit Epoch Date: _____

(e) Orbital Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)	(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)	(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)	(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 3: Antenna Beams

S6. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

(a) Beam ID	(b) T/R Mode	Isotropic Antenna Gain		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross-Polar Isolation (dB)	(h) Polarization Switchable? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive				
		(c) Peak (dBi)	(d) Edge (dBi)							(k) Input Losses (dB)	(l) Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noice Temperature (K)	(o) G/T at Max.Gain Pt. (dB/K)	(p) Min Saturation Flux Density (dBW/m2)	Input Attenuator (dB) (q) Max. Value	(r) Step Size

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 4: Service Areas

S7. SERVICE AREA CHARACTERISTICS For each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(c) Service Area Diagram File Name (GXT File)	(d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 5: Beam Diagrams

S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data. Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

(a) Beam ID	(b) T/R Mode	(c) Co- or Cross-Polar Mode ("C" or "X")	(d) Ref. Orbital Longitude (Deg. E/W)	(e) Antenna Gain Contour Diagram Map (Figure No.)	(f) Antenna Gain Contour Data (GXT File or Table No.)	Max. Power Flux Density (dBW/4kHz/m2) At Angle of Arrival above horizontal (for emission with highest PFD)				
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg

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Page 6: Channels and Transponders

S9. SPACE STATION CHANNELS For each frequency channel provide:

(a) Channel No.	(b) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H,V,L,R)	(f) TT&C or Comm Channel (T or C)

S10. SPACE STATION TRANSPONDERS** For each transponder provide:

(a) Transponder ID	(b) Transponder Gain* (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID

*Transponder gain between output of receiving antenna and input of transmitting antenna.
**Also complete this table for half-links such as TT&C and on-board processing. In such cases, provide the receive or transmit information, as appropriate.

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 7: Typical Emissions

S11. TYPICAL EMISSIONS For each planned type of emission provide:

Associated Transponder ID Range: (a) Start	Associated Transponder ID Range: (b) End	(c) Emission Designator	(d) Emission Bandwidth (kHz)	Modulation ID: (e) Digital (Table S12)	Modulation ID: (f) Analog (Table S13)	(g) Noise Budget Reference (Table No.)	(h) Energy Dispersal Bandwidth* (kHz)	Receive Band (Assoc.Transmit Stn): (i)Assoc.Stn Max Antenna Gain (dBi)	Receive Band (Assoc.Transmit Stn): Assoc. Station Transmit Power (dBW) (j) Min.	Receive Band (Assoc.Transmit Stn): Assoc. Station Transmit Power (dBW) (k) Max.	Transmit Band (This Space Station): EIRP (dBW) (l) Min.	Transmit Band (This Space Station): EIRP (dBW) (m) Max.	Transmit Band (This Space Station): (n)Max. Power Flux Density (dBW/4Hz/m2)	Transmit Band (This Space Station): (o) Assoc. Stn Rec. G/T (dB/K)

* For those emissions using energy dispersal, provide the bandwidth of the energy dispersal. Otherwise, leave blank.

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 8: Digital Modulation

S12. DIGITAL MODULATION PARAMETERS For each digital emission provide:

(a) Digital Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) Carriers per Transponder	(e) Carrier Spacing (kHz)	(f) No. of Phases	(g) Uncoded Data Rate (kbps)	(h) FEC Error Correction Coding Rate	(i) CDMA Processing Gain (dB)	(j) Total C/N Performance Objective (dB)	(k) Single Entry C/I Objective (dB)

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 9: Analog Modulation

S13. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a) Analog Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) Carriers per Transponder	(c) Carrier Spacing (kHz)	(f) Signal Type* (see below)	(g) Channels per Carrier	Multi-channel Telephony (h) Ave. Companded Talker Level (dBm0)	Multi-channel Telephony (i) Bottom Baseband Freq. (MHz)	Multi-channel Telephony (j) Top Baseband Freq. (MHz)	Multi-channel Telephony (k) RMS Modulation Index	(l) Video Standard NTSC, PAL, etc.	(m) Video Noise Weighting (dB)	(n) Video & SCPC/FM Modulation Index	(o) SCPC/FM Compander, Preemphasis, & Noise Weighting (dB)	(p) Total C/N Performance Objective (dB)	(q) Single Entry C/I Objective (dB)

*Indicate whether signal is (a) FDM/FM, (b) CSSB/AM, (c) SCPC/FM, or (d) TV/FM.

Page 10: TT&C

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S14. Is the space station(s) controlled and monitored remotely? If YES, provide the location and telephone number of the TT&C control point(s). ☐ YES ☐ NO

Remote Control (TT&C) Location(s):

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number	S14g. Call Sign of Control Station (if appropriate)		

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number	S14g. Call Sign of Control Station (if appropriate)		

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number	S14g. Call Sign of Control Station (if appropriate)		

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number	S14g. Call Sign of Control Station (if appropriate)		

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number	S14g. Call Sign of Control Station (if appropriate)		

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number	S14g. Call Sign of Control Station (if appropriate)		

S15. SPACECRAFT PHYSICAL CHARACTERISTICS

S15a. Mass of spacecraft without fuel (kg)	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (%)
S15b. Mass of fuel & disposables at launch (kg)		
S15c. Mass of fuel at beginning of life (kg)	S15f. Length (m)	S15i. Payload (%)
S15d. Mass of spacecraft and fuel at launch (kg)	S15g. Width (m)	S15j. Bus (%)
S15e. Deployed Area of Solar Array (square meters)	S15h. Height (m)	S15k. Total (%)

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts)	(a)	(f)	(k)	(p)
Bus (Watts)	(b)	(g)	(l)	(q)
Total (Watts)	(c)	(h)	(m)	(r)
Solar Array (Watts)	(d)	(i)	(n)	(s)
Depth of Battery Discharge (%)	(e) %	(j) %	(o) %	(t) %

S17. CERTIFICATIONS

a. Are the power flux density limits of § 25.208 met?	☐ YES	☐ NO	☐ N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	☐ YES	☐ NO	☐ N/A
b. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2), and (3) met?	☐ YES	☐ NO	☐ N/A

In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R. § 25.114.

APPENDIX D

Initial Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act (RFA),[1] the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this Notice of Proposed Rulemaking. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice of Proposed Rulemaking provided above in Section VIII. The Commission will send a copy of the Notice of Proposed Rulemaking, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration. *See* 5 U.S.C. § 603(a). In addition, the Notice of Proposed Rulemaking and IRFA (or summaries thereof) will be published in the Federal Register. *See id.*

A. Need for, and Objectives of, the Proposed Rules

The objective of the proposed rules is to enable the Commission to process applications for satellite licenses more quickly than it can under its current rules. These rule revisions are needed because delays in the current satellite licensing process may impose economic costs on society, and because recent changes in the International Telecommunication Union procedures require us to issue satellite licenses more quickly in order to meet U.S. international treaty obligations. In addition, the current satellite licensing process is not well suited to some satellite systems employing current technology. Finally, revision of the satellite licensing process will facilitate the Commission's efforts to meet its spectrum management responsibilities.

B. Legal Basis

The proposed action is supported by Sections 4(i), 7(a), 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a), 303(c), 303(f), 303(g), 303(r).

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules May Apply

The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the proposed rules, if adopted.[2] The RFA generally defines the term "small entity " as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[3] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[4] A small business concern is one which: (1) is independently owned and operated;

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[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

[2] 5 U.S.C. § 603(b)(3).

[3] *Id.* § 601(6).

[4] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for

(2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).[5] A small organization is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."[6] Nationwide, as of 1992, there were approximately 275,801 small organizations.[7] "Small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."[8] As of 1992, there were approximately 85,006 such jurisdictions in the United States.[9] This number includes 38,978 counties, cities, and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000.[10] The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (91 percent) are small entities. Below, we further describe and estimate the number of small entity licensees that may be affected by the proposed rules, if adopted.

The rules proposed in this Notice of Proposed Rulemaking would affect satellite operators, if adopted. The Commission has not developed a definition of small entities applicable to satellite operators. Therefore, the applicable definition of small entity is generally the definition under the SBA rules applicable to Satellite Telecommunications.[11] This definition provides that a small entity is expressed as one with $11.0 million or less in annual receipts.[12] 1997 Census Bureau data indicate that, for 1997, 273 satellite communication firms had annual receipts of under $10 million. In addition, 24 firms had receipts for that year of $10 million to $24,999,990.[13]

In addition, Commission records reveal that there are approximately 240 space station operators licensed by this Commission. We do not request or collect annual revenue information, and thus are unable to estimate of the number of licensees that would constitute a small business under the SBA definition. Small businesses may not have the financial ability to become space station licensees because of the high implementation costs associated with satellite systems and services.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

With few exceptions, none of the proposed rules in this notice are expected to increase the reporting, record keeping and other compliance requirements of any telecommunications carrier. The exceptions are as follows: (1) We propose requiring space station applicants to provide the

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public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

[5] Small Business Act, 15 U.S.C. § 632 (1996).

[6] 5 U.S.C. § 601(4).

[7] 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

[8] 5 U.S.C. § 601(5).

[9] U.S. Dept. of Commerce, Bureau of the Census, "1992 Census of Governments."

[10] *Id.*

[11] "This industry comprises establishments primarily engaged in providing point-to-point telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications." Small Business Administration, 1997 NAICS Definitions, NAICS 513340.

[12] 13 C.F.R. § 120.121, NAICS code 513340.

[13] U.S. Census Bureau, 1997 Economic Census, Subject Service: Information, "Establishment and Firm Size," Table 4, NAICS 513340 (Issued Oct. 2000).

antenna gain pattern contour diagrams in the .gxt format required in submissions to the ITU. (2) We propose requiring space station applicants to specify power flux density (PFD) values at angles of arrival equal to 5, 10, 15, 20 and 25 degrees. (3) We propose expanding Schedule S so that space station license applicants can provide information on polarization isolation, polarization switching, and alignment of polarization vectors relative to the equatorial plan. (4) We propose mandating that applicants certify that they will comply with the service area requirements of Sections 25.143, 25.145, and 25.208, and the out-of-band emission requirements of Section 25.202.

These proposed increased reporting requirements are necessary because we also propose substantially decreasing the administrative burdens associated with the current satellite licensing process. Specifically, there are two options proposed in this Notice of Proposed Rulemaking for reforming the satellite licensing process. Under one of the options, the first-come, first-served approach, there may be an increased incentive to apply for a satellite license merely to sell it. In addition, under both options, we invite comment on eliminating our current method of preventing speculation, the anti-trafficking rule. Therefore, more detailed reporting requirements will be needed in the event that we adopt these proposed license procedure reforms to help us determine whether an applicant is seeking a satellite license merely for speculative purposes. The anti-trafficking rule is more administratively burdensome than the proposed increased data collections.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities. 5 U.S.C. § 603(c).

We have attempted not to foreclose any option. One alternative we have not embraced is the need to adopt any filing window in the event that we adopt a first-come, first-served procedure.[14] We believe that the alternative of a first-come, first-served satellite licensing procedure without a filing window better serves the interests of all possible applicants, including small entity applicants. For instance, for some applicants, the first-come, first-served procedure may be less expensive than maintaining an application throughout the longer processing round procedure under the Commission's current rules.[15] A filing window in a first-come, first-served satellite licensing procedure would tend to duplicate some of the delay inherent in the processing round procedure under the Commission's current rules.[16]

F. Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rules

None.

[14] *See* para. 44, *supra*.
[15] *See* para. 41, *supra*.
[16] *See* para. 44, *supra*.

SEPARATE STATEMENT OF COMMISSIONER KATHLEEN ABERNATHY

In re: Amendment of the Commission's Space Station Licensing Rules and Policies, Notice of Proposed Rulemaking, IB Docket No. 02-34 (adopted February 14, 2002).

Today's Notice launches an important dialog about the future of our satellite space station licensing regime. The United States has long been a leader in the satellite arena. There is no doubt, however, that as satellites have become a more ubiquitous and essential component of our nation's and the world's communications networks, our regulatory structures are being tested in new and unforeseen ways. As satellites bring essential competition in the video, voice and broadband marketplaces, today more than ever we must re-examine our licensing approaches to this vital resource. The debate that begins with today's notice will help to shape our response to this changing landscape.

The answers will not be easy to find. Indeed, if they were easy, we would have presumably come up with them long ago. But this work is vital to maintaining our competitive edge. That edge is at risk if our satellite licensing process drags on too long or creates too much uncertainty. In this regard, our current process appears to put our interests at risk. For example, in 1991 David Otten, founder and CEO of Celsat, first came to the FCC with an idea to utilize spectrum in the 2 GHz band for MSS. On July 17, 2001, Celsat got its license. Although we are fortunate that Celsat was able to carry the ball for ten long years before receiving a license, we cannot and must not require license applicants to have such patience and tenacity in order to get a satellite license.

It is unclear exactly what changes to our licensing system will yield the greatest efficiencies and benefits to the public. Therefore, we are seeking comment on two possible alternatives – either a wholesale change to a first-come first-served approach or specific reforms to our existing licensing process. I know that our current approach has weaknesses, but I do not want to trade in this set of problems for a larger set of, as yet, unknown problems with unknown consequences. I strongly encourage the parties to think creatively about these problems, our two proposals, and any other approaches that will achieve our goals.

Two of my five guiding principles as a Commissioner are: (1) the FCC must be humble about what is does and can know; and (2) we are a service-based organization and we should act like it. Here, that means seeking as much information as possible from all the parties so that we can create a process that is fair and prompt. I look forward to working together to make our standard of service quality a reality.